

Appendix 2

BaTHNES Ecology Officer Comment

ASSESSMENT OF LIKELY SIGNIFICANT EFFECT ON A EUROPEAN SITE	
CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2010	
PART A: The Proposal	
Type of application:	Minerals & Waste Application Bath & North East Somerset Council
Application reference no:	10/05199/MINW
National Grid reference:	(E) 359772 (N) 158623
Application site:	<i>Stowey Quarry Stowey Road Stowey Bristol</i> <i>BS39 5UJ</i>
Brief description of proposal:	Restoration of Stowey Quarry by landfilling of Stable Non Reactive Hazardous Waste (SNRHW) and inert wastes.
European site name(s):	Chew Valley Lake Special Protection Area
Introduction	
<p>This application regarding landfilling of Stowey Quarry has been considered under the Conservation (Natural Habitats & c.) Regulations 2010. In particular, the project is examined with regard to its impact on the Conservation Objectives of Chew Valley Lake Special Protection Area (SPA).</p> <p>Before granting planning consent, Bath & North East Somerset Council must be certain that the proposed development, either on its own or in combination with other plans or projects, will not have a significant effect on the SPA. Any uncertainty requires Bath and North East Somerset Council, as the competent authority, to carry out a fuller investigation known as an “Appropriate Assessment”.</p> <p>The focus of the Council’s assessment is on the conservation objectives of the SPA. Essential attributes of these objectives are maintaining the water levels & water quality of Chew Valley Lake.</p>	
Part B: The European Sites potentially affected	
Site Name & Designation	Chew Valley Lake is designated under the Wild Birds Directive as a Special Protection Area (SPA).

Component Sites of Special Scientific Interest (SSSIs)	Chew Valley Lake	
Conservation Objectives	<p>The Conservation Objectives are: to maintain in favourable condition (or restore to favourable condition if features are judged to be unfavourable) the listed habitat features and special interest features (habitats, vegetation types, species, species assemblages etc.) for which the land is designated.</p> <p>The Conservation Objectives for the SSSI and SPA designations at the site are defined by Natural England for the full range of interest features for which the site is designated (Conservation objectives and definitions of favourable condition for designated features of interest; Chew Valley Lake; 10th March 2009).</p>	
List Of Special Interest Features	<p>The interest feature for which the site is designated a SPA is for its “Aggregation of non-breeding birds – Shoveler”.</p> <p>This feature is dependent upon the maintenance in favourable condition of the habitat “Standing waters on sedimentary rocks, eutrophic”.</p>	
Is the proposal directly connected with or necessary to the management of the European site for nature conservation?	No	
Proximity of proposal to Chew Valley Lake SPA:	2km	
PART C: Risk Assessment		
<p>The risk assessment for the proposal based on the details initially submitted, is summarised and discussed below.</p>		
Special Interest Feature	Potential hazard	Potential exposure to hazard
<i>Standing Waters (habitat upon which the Shoveler depend)</i>	harm to water quality	pollutants from Stowey Quarry landfill entering Chew Valley Lake
What potential hazards are likely to affect the interest features of the SPA?		
<p>The following potential hazards can be identified:</p> <ul style="list-style-type: none"> ➤ risk of pollutants present in waste deposited during landfill of Stowey Quarry, either from Stable Non Reactive Hazardous Waste (SNRHW) and inert wastes, or from other (non-permitted) waste being deposited at Stowey Quarry, escaping into the water catchment ➤ the level of potential risk of affecting the SPA conservation objectives ➤ The possible scale or magnitude of any potential risk, & likely duration and irreversibility or reversibility of the effect 		
<p>From the initial details submitted for the planning application, it was considered that the proposal would not impact on Chew Valley Lake SPA <u>provided</u> watercourses and water within the catchment would not be contaminated as a result of the proposals. Sufficient safeguards would need to be in place to ensure no effect on water quality of the lake.</p>		

The application did not initially demonstrate sufficient analysis of risks, nor that sufficient safeguards will be in place. More information was therefore requested to demonstrate this, and that there would be no significant effect on the conservation status of the Special Protection Area.

There are no other projects with which there could be “in combination” effects so this issue has not been considered in depth for the “test of likely significant effect”.

Potential impacts: Potential harm to the water quality of Chew Valley Lake, and subsequent harm to the habitats and bird populations it supports, including Shoveler.

Part D: Further investigation; Discussion and Assessment of likely effects and their significance

NB In assessing the effect of a development, any control or mitigation measures should be taken into account.

A further report was submitted: “**Conceptual Site Model Report for Stowey Quarry, Bishop Sutton, near Bristol**” *Watermill Environment Ltd; Rob Harper April 2011.*

The report sets out to address the following points, and to qualitatively assess the potential risk posed by the proposed landfill to the surrounding water environment:

- The proximity of the site to Chew Valley Reservoir, some 2 km northwest of the site, which is used as a drinking water supply and is also a Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI).
- The potential for contamination of springs and streams in the vicinity of the site that drain into the reservoir.
- Uncertainty over the groundwater regime (flow mechanism and direction) at the site.
- Uncertainty over landfill engineering, surface water control and pre-disposal waste treatment (sorting).

Table 5 of the report summarises the risk assessment findings as follows:

Criterion	Comment
Pollution potential of source	Leachate within SNRHW is likely to exhibit lower concentrations than other Non-hazardous waste. However, potentially high concentrations of certain chemicals such as chloride and sulphate may occur.
Presence of migration pathway(s)	Potential for downward migration of leachate through the engineered landfill liner towards the watertable within the underlying Lias Limestone strata (probably classified a Secondary B Aquifer by the EA).
Receptors present	Groundwater beneath the site (both receptor and pathway) and surface waters at downgradient springs some 900 m northeast of the site boundary.

The report makes the following conclusions:

- Chew Valley Lake is considered at negligible risk of pollution due to the large vertical thickness (approximately 100 m) of mudstone strata between the site and the Lake. Groundwater flow at the site is likely to still be northeastwards away from the Lake.
- The spring source of the Barelegs Brake is located on the upgradient side of the site and therefore considered at low potential risk.
- There are no apparent springs supported by groundwater in the Lias Limestone strata in the immediate vicinity of the site. The closest potential springs considered at potential risk are located some 900 m northeast of the site (to be assessed quantitatively in due course).
- The likelihood that a significant volume of leachate could escape the engineered landfill, flow downgradient to the groundwater discharge zone and subsequently flow downstream into the Chew Valley Lake is considered very small (to be assessed quantitatively in due course).

The Council has used independent specialist hydrogeological expertise to assess this report, and its conclusions are not disputed (ref Email from Jenny Ellerton, 24th May 2011- attached - Appendix 1).

A further quantitative Hydrogeological Risk Assessment (HRA) of potential risk posed by the landfill to the local water environment will be undertaken as part of the subsequent application to the Environment Agency for an Environmental Permit. This is required by law and a permit will not be issued until the Environment Agency are satisfied that there is no risk of pollution to the Lake, and that all necessary control measures are in place.

It is therefore considered that with the required Environmental Permit, and all necessary control measures in place (which will be required before the site may become operational), the proposal does not present a risk to the water quality of the lake, nor to the Shoveler populations. The risk of a “likely significant effect” on the SPA can be excluded.

Summary Assessment of Likely Significant Effects

Criteria feature	Attribute term in guidance	Likely Significant Effect
Standing waters: Water quality	Existing data from Bristol Water monitoring programme. Stable nutrient levels appropriate to lake type.	none (with Environmental Permit & control measures in place)
Aggregations of non-breeding birds: Shoveler	Bird population size. Maintain population within acceptable limits.	none (with Environmental Permit and control measures in place)
Standing waters: Lake substrate	Shoreline walk. Maintain natural shoreline. No more than 5% of lakeshore should be heavily modified.	n/a - no direct effect

Standing waters: Sediment load	Observe areas of increased erosion and deposition. Maintain natural sediment load.	n/a - no direct effect
Standing waters: Vegetation composition - negative indicator species	Non-native species should be absent or present at low frequency. Cover of benthic and epiphytic filamentous algae should be less than 10%.	n/a - no direct effect

PART E: Council's Conclusion

<p>Is the proposal likely to have a significant effect on a European site?</p> <p>No.</p>	<p>With the required Environmental Permit, and all necessary control measures being in place, which will be required before the site may become operational, it can be concluded that this proposal does not present a risk to the water quality of the lake.</p> <p>The risk of a "likely significant effect" on the SPA is excluded in relation to this project.</p> <p>This conclusion has been informed by the planning consultation process and planning consultation responses by Natural England and the Council ecologist, together with independent specialist hydrogeological advice.</p>	
Name of Assessing Officer:	Lucy Corner	Job Title: Ecologist
Signed:		Date: 4 th June 2011
Name of Supervising Officer:		Job Title:
Signed:		Date:

PART F: Consultation with English Nature

English Nature comment on conclusion:	<p>Natural England commented on the planning application. Following the submission of the hydrogeological report, Natural England have confirmed they are satisfied with the information provided. (ref email from Alison Howell 25th May 2011, Attached, Appendix 2).</p>	
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